

WHAT IS CLAIMED IS:

1. A primer comprising:
  - (a) from about 3 to about 40% by weight of a film or matrix former,
  - (b) from about 0.1 to about 15% by weight of an additive having
  - 5 a molecular mass that ranges from about 500 to about 20,000,
  - (c) from about 0.1 to about 15% by weight of an ionic and/or colloidal metal or its organometallic covalent compound or its complex compound with organic ligands,
  - (d) from about 0.5 to about 30% by weight of an organic and/or
  - 10 inorganic filler,
  - (e) from about 0.05 to about 5% by weight of a hydrophilic swelling material comprising finely divided particles containing silanol groups and/or partly modified silanol groups having a diameter that ranges from about 7 to about 40 nm and a specific surface area that ranges from
  - 15 about 50 to about 380 m<sup>2</sup>/g, and
  - (f) from about 50 to about 90% by weight of organic solvents, wherein all amounts by weight being based on the overall primer formulation.
2. The primer of Claim 1, wherein the film or matrix former
- 20 comprises polyurethane.
3. The primer of Claim 1, wherein the finely divided particles of the hydrophilic swelling substance have a spherical surface.
4. A metallizable substrate comprising:
  - (a) a substrate,
  - 25 (b) a primer comprising:
    - (i) from about 3 to about 40% by weight of a film or matrix former,
    - (ii) from about 0.1 to about 15% by weight of an additive having a molecular mass that ranges from about 500 to about 20,000,
    - (iii) from about 0.1 to about 15% by weight of an ionic and/or
    - 30 colloidal metal or its organometallic covalent compound or its complex compound with organic ligands,

(iv) from about 0.5 to about 30% by weight of an organic and/or inorganic filler,

(v) from about 0.05 to about 5% by weight of a hydrophilic swelling material comprising finely divided particles containing silanol groups and/or partly modified silanol groups having a diameter of from 7 to 40 nm and a specific surface area of 50 to 380 m<sup>2</sup>/g, and

(vi) from about 50 to about 90% by weight of organic solvents, wherein all amounts by weight being based on the overall primer formulation.

10        5.        A metallized substrate comprising the reaction product of:

(a) a substrate,

(b) a primer comprising:

(i) from about 3 to about 40% by weight of a film or matrix former,

(ii) from about 0.1 to about 15% by weight of an additive having a  
15        molecular mass that ranges from about 500 to about 20,000,

(iii) from about 0.1 to about 15% by weight of an ionic and/or colloidal metal or its organometallic covalent compound or its complex compound with organic ligands,

(iv) from about 0.5 to about 30% by weight of an organic and/or  
20        inorganic filler,

(v) from about 0.05 to about 5% by weight of a hydrophilic swelling material comprising finely divided particles containing silanol groups and/or partly modified silanol groups having a diameter of from 7 to 40 nm and a specific surface area of 50 to 380 m<sup>2</sup>/g, and

(vi) from about 50 to about 90% by weight of organic solvents,  
25        wherein all amounts by weight being based on the overall primer formulation.

6.        The metallized substrate of Claim 5, wherein the substrate comprises a plastic substrate.

30        7.        The metallized substrate of Claim 5, wherein the substrate comprises a glass substrate.

9. The metallized substrate of Claim 5, wherein the substrate is selected from the group consisting of acrylonitrile-butadiene-styrene polymers, polycarbonates, polyamides, polyesters, polyvinyl chloride, polyethylene, polypropylene, polyphenylene sulphide, polyphenylene oxide, polyurethanes, polyimides, polyamideimides, polyetherimide, polysulphones, polyacetals, polystyrenes, thermosets, blends of the aforementioned polymers, and copolymers the aforementioned polymers.

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